

Anthropology 3250: Osteology (Fall 2015)
Tues 3:00-5:30 Main 248 (Osteology Lab)
Course fee: \$20.00 for Laboratory Materials

Instructor: Dr. Patricia M. Lambert. Office: Main 245E/Main 333

Office Hours: Thurs. 2:00-3:30 or by Appointment.

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Osteology Lab Hours: Monday-Friday 8:00 a.m. - 5:00 p.m.

Course Objectives:

The purpose of this course is to provide students with an in-depth knowledge of the human skeleton and a brief introduction to the skeletal remains of non-human animals. At the conclusion of the course, students will be able to identify all of the bones and teeth of the human skeleton, to distinguish these from the bones and teeth of non-human animals, and to make basic identifications of several non-human mammals, birds, reptiles and fish. Students will develop a basic working knowledge of techniques in age and sex determination, and be able to recognize a few of the more common forms of skeletal pathology. Finally, students will be introduced to problem-solving applications in the fields of bioarchaeology, paleoanthropology, paleopathology, and forensic anthropology. The course format is specifically designed to help students achieve the following learning goals set out by the Anthropology Program:

Disciplinary Knowledge

- Facilitate development of knowledge concerning the nature, intent, and scope of anthropology
- Attain depth in biological anthropology
- Develop recognition of and respect for human differences.

Methods of Inquiry

- Familiarity with methods in bioarchaeological / forensic analysis
- Ability to apply methods specific to archaeology / biological anthropology

Skills and Career Competencies

- Comprehend reading material appropriate to 3000 course level.
- Communicate effectively in written and oral forms.
- Bone identification, with field and lab applications in the fields of CRM and forensics.

Texts:

- 1.) White, T.D., and P. A. Folkens (2005). *The Human Bone Manual*. Elsevier, Amsterdam.
- 2.) Rhine, Stanley (1998). *Bone Voyage: A Journey in Forensic Anthropology*. University of New Mexico Press, Albuquerque

Note Regarding textbook purchases: Textbooks are available through the USU book store and through Amazon.com as a fundraiser for the Museum of Anthropology. Ordering through Amazon.com can net students a better price on new and used texts, and if the link is made through the museum's website (<http://astore.amazon.com/usumuseumofan-20>) the museum receives a percentage of the price of everything purchased. Simply go to the website listed above, look up your course, click on the textbook(s) featured for your class, place them in your Amazon.com shopping cart, make your purchase, and your textbooks will be shipped to you and the museum automatically receive a commission on the sale.

Weekly Quizzes (25-30 points each):

Each class will begin with a quiz. Each quiz is cumulative, building on previous lessons. These quizzes will be primarily composed of bones and bone fragments and teeth, for which you will be asked to identify one or more of the following: 1) which bone/ tooth; 2) side; 3) feature; 4) suture; 5) osteometric point; 6) bone(s) that articulates with bone or feature; 7) sex; 8) age; 9) animal. **Questions pertaining to weekly readings and occasional videos will also be included on some quizzes for readings/films assigned in the same week as the quiz.** Make-ups will only be permitted if permission was obtained from the instructor before the beginning of class—and only in the case of illness or emergency.

Quizzes are given at the beginning of class, so it is essential to arrive on time! Latecomers will not be able to make up missed questions!

Article Reviews: (25 points each)

Each student will find two journal articles on primary research in human osteology published 2007–2012 and write a two-page review (12 pt. font, New Times Roman, 1" margins, stapled left corner) with commentary of each: one on bioarchaeology and one on forensic anthropology. Articles must be from one of the following journals:

- *American Journal of Physical Anthropology*
- *American Antiquity*
- *International Journal of Osteoarchaeology*
- *International Journal of Paleopathology*
- *Journal of Archaeological Science*
- *Journal of Forensic Sciences*

Articles selected for review must be approved by Dr. Lambert before the review is written, and no more than one student may write a review of any particular article. Students will present their reviews in class on October 24 and December 8—the last day of class. I am happy to review and comment on these assignments at any point in the semester.

Grading:

Your final grade will be based on your performance on 13 in-class quizzes and on your two article reviews. You will be graded based on the following curve: 90-100% = A; 80-89% = B; 65-79% = C; 50-64% = D; <50% = F. There is no final exam in this class!

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), qualified students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, (435)797-2444 voice, (435)797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

IN COMPLIANCE WITH THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA), it is the policy of the Department of Sociology, Social Work, & Anthropology at Utah State University to maintain the confidentiality of students' records. When it is not feasible to distribute exams, papers, and other assignments to students individually (e.g., in large-enrollment classes), the instructor may obtain from students a signed waiver of confidentiality regarding class assignments so exams, papers, and other academic exercises may be placed out during class or during other group sessions for students to pick up. A general waiver may be sought from each student at the beginning of the academic term with the understanding that the waiver may be rescinded, in writing, during the academic term if the student chooses. If a student does not sign a waiver, then assignments must be returned to that student confidentially.

USU CLASSROOM CIVILITY POLICY: Utah State University supports the principle of freedom of expression for both faculty and students. The University respects the rights of faculty to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede the learning process. Disruptive classroom behavior will not be tolerated. An individual engaging in such behavior may be subject to disciplinary action.

Class Schedule

Week 1 (September 1) Cranial Vault

Reading Assignment: White Chs. 1, 6, 7 (75-104)

Week 2 (September 8) Cranial Base / Face

Reading Assignment: White Chs. 3, 4, 6, 7 (104-126)

Week 3 (September 15) Adult Maxillary Dentition

Reading Assignment: White Chs. 8, 17 (328-331); Rhine Preface, Introduction

Week 4 (September 22): Adult Mandibular Dentition.

Reading Assignment: White Chs. 8; Rhine 1

Week 5 (September 29) Hyoid and Vertebrae

Reading Assignment: White Chs. 9, 17 (309-328); Rhine 2

Week 6 (October 6) Thorax / Shoulder Girdle

Reading Assignment: White Chs. 10, 11; Rhine 3

Week 7 (October 13) Upper Limb: Arm, Wrist & Hand Bones

Reading Assignment: White Chs. 12, 13; Rhine 6

Week 8 (October 20) Bones of the Pelvic Girdle / Adult Age & Sex Determination

Reading Assignment: White Chs. 14, 19; Rhine 4, 5

View online photo portfolio of Ötzi, the Iceman:

<http://ngm.nationalgeographic.com/2011/11/iceman-autopsy/clark-photography>

In-class presentation and submission of first article review.

Week 9 (October 27) Lower Limb: Leg and Foot Bones

Reading Assignment: White Chs. 15, 16; Rhine 7, 8

Week 10 (November 3) The Osteology of Juveniles

Reading Assignment: White Ch. 8; 2, 5; Rhine 9, 10

Week 11 (November 10) Mammals Part I: Large Mammals

Reading Assignment:

- 1) Davis (1987) *The Archaeology of Animals*, Ch. 1: Methods and problems in zooarchaeology. Yale University Press, New Haven.
- 2) Beisaw (2013) *Identifying and Interpreting Animal Bones*, Ch. 3: What animal is it? Texas A&M University Anthropology Series vol. 18.

Week 12 (November 17) Mammals Part II: Medium and Small Mammals

Reading Assignment:

- 1) Reitz & Wing (2008) *Zooarchaeology* 2nd Edition, Ch. 1: Zooarchaeology; Ch. 3: Basic biology. Cambridge University Press, Cambridge.
- 2) López-García, Cuenca-Bescós, Finlayson, Brown, Pacheco (2011) Palaeoenvironmental and palaeoclimatic proxies of the Gorham's cave small mammal sequence, Gibraltar, southern Iberia. *Quaternary International* 243: 137-142.

Week 13 (November 24) Birds

Reading Assignment:

- 1) De France (2005) Late Pleistocene marine birds from southern Peru: distinguishing human capture from El Niño-induced windfall. *JAR* 32:1131-1146.
- 2) Volkova and Zelenkov (2014) Avian remains from Marmot Cave, a new site in the north-west Altai, Siberia. *IJO* 24:300-305.

Week 14 (December 1) Reptiles and Fish

Reading Assignment:

- 1) Butler and Delacorte (2004) Doing zooarchaeology as if it mattered: Use of faunal data to address current issues in fish conservation biology in Owens Valley, California. In *Zooarchaeology and Conservation Biology*, edited by R. L. Lyman and K. P. Cannon, pp. 25-44. University of Utah Press, Salt Lake City.
- 2) Otero et al. (2015) Fish and plants: The "hidden" resources in the archaeological record of the North-central Patagonian coast (Argentina). *Quaternary International* 373: 72-81

Week 15 (December 8) In class Presentations of Second Article Review

Reading Assignment: White Ch. 18

Films to watch before class:

- 1) Bioarchaeological perspectives on male violence in prehistory:
<http://carta.anthropogeny.org/events/sessions/societal-variation-prehistoric-warfare-0> click on "2014_05_16_05_Lambert" and watch video (20 minutes)
- 2) Cure from the Crypt: <http://digital.films.com/play/RWNAH7> (27.17 minutes)

In class presentation and submission of second article review.

No Final Exam!!